Listing and Amendments to the Claims

This is the current listing of the claims:

Cancel claims 1 to 55.

56. (New) A method for staggercasting that is operated by a transmitter, the method comprising the steps of:

encoding a first signal representing content for generating a first encoded signal comprising successive independent decoding segments;

encoding a second signal representing the content for generating a second encoded signal comprising successive independent decoding segments respectively corresponding to the independent decoding segments of the first encoded signal; and wherein the encoding used for said second signal is different from the encoding used for said first signal,

delaying the first encoded signal with respect to the second encoded signal;

generating a composite signal comprising the delayed first encoded signal and the second encoded signal; and

channel encoding the composite signal such that the portion of the composite signal representing the first encoded signal is channel encoded differently from the portion of the composite signal representing the second encoded signal, wherein

each independent decoding segment has an associated time duration; and

in the delaying step, the first encoded signal is delayed by the associated time duration with respect to the second encoded signal.

57. (New). The method of claim 56 wherein the content is video.

58. (New) The method of claim 56 wherein the first encoded signal comprises an identification of the independent decoding segments and the second encoded signal comprises an identification of the independent decoding segments.

59. (New) The method of claim 56 wherein the content is video and wherein the successive independent decoding segments of the first encoded signal comprises a group of pictures, which group of pictures may be decoded independently, and the first encoded signal comprises an identification of picture boundaries and an identification of reference pictures and wherein the successive independent decoding segments of the second encoded signal comprises a group of pictures, which group of pictures may be decoded independently, and the second encoded signal comprises an identification of picture boundaries and an identification of reference pictures.

60. (New) The method of claim 56 wherein the step of encoding the first signal comprises the step of using Motion Picture Experts Group (MPEG 2) video compression encoding in which each independent decoding segment is delimited by an intra-coded (I) picture.

61. (New) The method of claim 56 wherein the content is video and the step of encoding the second signal provides the second encoded signal in which successive independent decoding segments comprise an instantaneous decoding refresh (IDR) frame and slice data, which independent decoding segment may be decoded independently, and the encoded signal comprises an indication of the instantaneous decoding refresh frame.

62. (New). The method of claim 56 wherein the step of encoding the second signal comprises the step of using joint video team (JVT) video compression encoding in which each independent decoding segment is delimited by an instantaneous decoding refresh frame.

63. (New) The method of claim 56 wherein the channel encoding step channel encodes the composite signal such that the portion of the composite signal representing the second encoded signal is channel encoded differently than the portion of the composite signal representing the first encoded signal.

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64. (New) The method of claim 56 wherein the channel encoding step channel encodes the composite signal such that the portion of the composite signal representing the first encoded signal is channel encoded using 8-vesitgal sideband (VSB) modulation and the portion of the composite signal representing the second encoded signal is channel encoded using 4-vesitgal sideband (VSB) modulation.

(Claims continued on the next page.)

65. (New) A staggercasting receiver, for receiving a composite signal comprising a first channel encoded signal and a second channel encoded signal, the first channel encoded signal representing a first encoded signal representing a content representative signal and source encoded to have successive corresponding independent decoding segments, the second channel encoded signal representing a second encoded signal representing the content representative signal and source encoded to have successive corresponding independent decoding segments, wherein the first channel encoded signal is coded with a different channel coding than the second channel encoded signal and the first encoded signal is delayed with respect to the second encoded signal, and the first encoded signal is source encoded differently from the second encoded signal, comprising:

a demultiplexer for extracting the first encoded signal and the second encoded signal from the composite signal and for generating an error signal representing an error in the composite signal;

a selector, responsive to the error signal, for selecting an independent decoding segment of the extracted second encoded signal if an error is detected in the composite signal during at least a portion of the corresponding independent decoding segment of the first encoded signal, and selecting an independent decoding segment of the extracted first encoded signal otherwise; and

a decoder for decoding the selected independent decoding segment of the corresponding extracted encoded signal for providing the content representative signal; and

wherein each independent decoding segment has an associated time duration;

and wherein the first encoded signal is delayed by the time duration with respect to the second encoded signal; and

the receiver further comprises a delay, coupled between the demultiplexer and the selector, for delaying the extracted second encoded signal by the time duration, whereby the extracted first encoded signal and the extracted second encoded signal are realigned in time.

66. (New) The receiver of claim 65 wherein the content representative signal is a video signal and the selector further comprises circuitry for smoothing a video image of the video signal during a transition between selecting one of the first and second encoded signals and selecting the other one of the first and second encoded signals.

67. (New) The receiver of claim 66 wherein the smoothing circuit comprises:

a video quality filter, coupled to receive the video signal for generating a filtered video signal having a variable video quality in response to a quality control signal; and

a selector, coupled to receive the video signal and the filtered video signal, and responsive to a transition control signal, to provide the filtered video signal during the transition and to provide the video signal otherwise.

68. (New) The receiver of claim 65 wherein each independent decoding segment in both the first encoded signal and second encoded signals is identified.

69. (New) The receiver of claim 65 wherein the first encoded signal is Motion Picture Experts Group (MPEG 2) video compression encoded in which each independent decoding segment is a group of pictures delimited by an intra-coded (I) picture.

70. (New) The receiver of claim 65 wherein the second signal is joint video team (JVT) video compression encoded in which each independent decoding segment is delimited by an instantaneous decoding refresh frame.

71. (New) The receiver of claim 65 wherein the second channel encoded signal is encoded differently than the first channel encoded signal.

72. (New) The receiver of claim 65 wherein the first channel encoded signal uses 8-vesitgal sideband (VSB) modulation and the second channel encoded signal uses 4-vesitgal sideband (VSB) modulation.

73. (New) A method for use in a staggercasting receiver, the method comprising:

receiving, by the staggercasting receiver, a composite signal comprising a first channel encoded signal and a second channel encoded signal, the first channel encoded signal representing a first encoded signal representing a content representative signal and source encoded to have successive corresponding independent decoding segments, the second channel encoded signal representing a second encoded signal representing the content representative signal and source encoded to have successive corresponding independent decoding segments, wherein the first channel encoded signal is coded with a different channel coding than the second channel encoded signal and the first encoded signal is delayed with respect to the second encoded signal, and the first encoded signal is encoded differently from the second encoded signal;

extracting the first encoded signal and the second encoded signal from the received composite signal;

generating an error signal representing an error in the composite signal;

selecting, responsive to the error signal, an independent decoding segment of the extracted second encoded signal if an error is detected in the composite signal during at least a portion of the corresponding independent decoding segment of the first encoded signal, and selecting an independent decoding segment of the extracted first encoded signal otherwise;

decoding the selected independent decoding segment of the corresponding extracted encoded signal for providing the content representative signal; and

wherein each independent decoding segment has an associated time duration; and wherein the first encoded signal is delayed by the time duration with respect to the second encoded signal; and further comprising the step of

delaying the extracted second encoded signal by the time duration, whereby the extracted first encoded signal and the extracted second encoded signal are realigned in time.

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74. (New) The method of claim 73 wherein the content representative signal is a video signal and further comprising the step of:

smoothing a video image of the video signal during a transition between selecting one of the first and second encoded signals and selecting the other one of the first and second encoded signals.

75. (New) The method of claim 74 wherein the smoothing step comprises:

filtering the video signal for generating a filtered video signal having a variable video quality in response to a quality control signal; and

selecting between the filtered video signal and the video signal, where the filtered video signal is provided during the transition and the video signal is provided otherwise.

76. (New) The method of claim 73 wherein each independent decoding segment in both the first encoded signal and second encoded signals is identified.

77. (New) The method of claim 73 wherein the first encoded signal is Motion Picture Experts Group (MPEG 2) video compression encoded in which each independent decoding segment is a group of pictures delimited by an intra-coded (I) picture.

78. (New) The method of claim 73 wherein the second signal is joint video team (JVT) video compression encoded in which each independent decoding segment is delimited by an instantaneous decoding refresh frame.

79 (New) The method of claim 73 wherein the second channel encoded signal is encoded differently than the first channel encoded signal.

80. (New) The receiver of claim 73 wherein the first channel encoded signal uses 8-vesitgal sideband (VSB) modulation and the second channel encoded signal uses 4-vesitgal sideband (VSB) modulation.